

WHAT IS CLAIMED IS:

1. An inorganic electroluminescent device comprising in the following order:

5 an underlayer formed of a first compound semiconductor of Group IIa-VIb; and

 a light emitting layer formed of a second compound semiconductor of Group IIa-VIb,

 said first compound semiconductor and said second
10 compound semiconductor having the same crystalline structure.

2. The inorganic electroluminescent device according to claim 1, wherein said first compound semiconductor and said second semiconductor have a rock-salt structure.

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3. The inorganic electroluminescent device according to claim 1, wherein said first compound semiconductor and said second compound semiconductor have an orientation in a <100> direction.

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4. The inorganic electroluminescent device according to claim 1, wherein the bandgap of said first compound semiconductor is larger than the bandgap of said second compound semiconductor.

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5. The inorganic electroluminescent device according to claim 1, wherein said first compound semiconductor contains magnesium and sulfur, and said second compound semiconductor contains magnesium and sulfur.

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6. The inorganic electroluminescent device according to claim 5, wherein said second compound semiconductor further contains calcium.

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7. The inorganic electroluminescent device according to claim 1, wherein said second compound semiconductor contains $\text{Mg}_{1-x}\text{Ca}_x\text{S}$, and the Ca composition ratio x is $0.1 \leq x \leq 0.15$.

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8. The inorganic electroluminescent device according to claim 1, wherein the thickness of said underlayer is not larger than 500 nm.

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9. The inorganic electroluminescent device according to claim 8, wherein the thickness of said underlayer is not larger than 200 nm.

10. The inorganic electroluminescent device according to claim 1, wherein the thickness of said light emitting layer is larger than the thickness of said underlayer.

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11. The inorganic electroluminescent device according to claim 1, wherein said light emitting layer contains a rare earth element or a transition metal element as a substance acting as a luminescent center.

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12. The inorganic electroluminescent device according to claim 11, wherein said substance acting as the luminescent center is an element selected from the group consisting of europium, cerium, and manganese.

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13. The inorganic electroluminescent device according to claim 1, wherein said second compound semiconductor contains $Mg_{1-x}Ca_xS$, and Eu is doped into $Mg_{1-x}Ca_xS$ as a substance acting as a luminescent center, and the composition ratio of Eu to

15 Mg is not larger than 0.1.

14. The inorganic electroluminescent device according to claim 13, wherein the composition ratio of Eu to Mg is not larger than 0.01.

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15. A method of fabricating an inorganic electroluminescent device, comprising the steps of:

forming an underlayer principally composed of a first compound semiconductor of Group IIa-VIb; and

25 forming on said underlayer a light emitting layer

principally composed of a second compound semiconductor of Group IIa-VIb having the same crystalline structure as that of said first compound semiconductor and doped with a substance acting as a luminescent center.

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16. The method according to claim 15, wherein
said step of forming a underlayer comprises the step of forming said underlayer at a first temperature, and

10 said step of forming a light emitting layer comprises the step of forming said light emitting layer at a second temperature higher than said first temperature.

17. The method according to claim 16, wherein
said first temperature is not higher than 100°C, and
15 said second temperature is higher than 100°C.

18. The method according to claim 16, wherein
said second temperature is not lower than 150°C nor higher than 350°C.

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19. The method according to claim 15, wherein
said first compound semiconductor contains magnesium and sulfur, and said second compound semiconductor contains magnesium and sulfur.

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20. The method according to claim 19, wherein
said second compound semiconductor further comprises
calcium.